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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. PAT-1238DIV

In re patent application of

Yu ZHENG

Group Art Unit: 3637

Serial No. 09/618,497

Examiner: Yip, Winnie S.

Filed: July 18, 2000

For: COLLAPSIBLE STRUCTURES

**APPEAL BRIEF UNDER 37 C.F.R. §41.37**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

In response to the Notification of Non-Compliant Appeal Brief dated June 1, 2005, Applicant is submitting this revised Appeal Brief.

This appeal is taken from the final rejection dated February 8, 2005, in which claims 1-3, 71 and 73 were finally rejected. This appeal brief is being filed in triplicate. No fee is due because a check in the amount of \$500.00 to cover the Notice of Appeal and the filing of an Appeal Brief was sent on May 10, 2005.

1. **Real Party in Interest - 37 C.F.R. §41.37(c)(1)(i)**

The real party in interest is the Appellant, Patent Category Corporation.

2. **Related Appeals and Interferences – 37 C.F.R. §41.37(c)(1)(ii)**

There are no related appeals and interferences.

**3. Status of Claims - 37 C.F.R. §41.37(c)(1) (iii)**

Claims 1-3 and 71 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over D341,407 to McLeese (hereinafter "McLeese '407") in view of USP 5,592,961 to Chin (hereinafter "Chin").

Claims 1-3, 71 and 73 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Re. 35,571 to McLeese (hereinafter "McLeese '571") in view of USP 5,411,046 to Wan (hereinafter "Wan").

No claim has been allowed.

Appellant appeals the rejections of claims 1-3, 71 and 73. A copy of these claims is appended hereto.

**4. Status of Amendment(s) - 37 C.F.R. §41.37(c)(1)(iv)**

No amendments have been filed after the final rejection. Thus, all amendments which have been filed have been entered.

A notice of appeal is being timely filed, concurrently with this brief.

**5. Summary of Claimed Subject Matter - 37 C.F.R. §41.37(c)(1)(v)**

The claimed inventions in independent claims 71 and 73 relate, generally, to a collapsible structure as shown in FIGS. 1A and 1B, and described on page 6, line 3 to page 8, line 19 of the specification. The collapsible structure includes a single base panel 22 having a foldable frame member 38 that has a folded and an unfolded orientation, and a material 40 covering the frame member 38 when the frame member 38 is in the unfolded orientation. The base panel 22 has a sleeve 36 extending along its outer periphery.

The collapsible structure also includes a single upper panel 24 defined by a single foldable frame member 38 that has a folded and an unfolded orientation, and a material 40 covering the frame member 38 of the upper panel 24. The upper panel 24 has opposing first and second end edges 30a and 30c, and a sleeve 36 extending along its outer periphery.

A first interconnecting fabric piece 32 couples the sleeve at the first end edge 30a of the upper panel 24 to the sleeve of the base panel 22, and a second interconnecting fabric piece 34 couples the sleeve at the second end edge 30c of the

upper panel 24 to the sleeve of the base panel 22. The first and second end edges 30a, 30c extend outside the outer periphery of the base panel 22.

**6. Grounds of Rejection to be Reviewed On Appeal - 37 C.F.R.**

**§41.37(c)(1)(vi)**

(A) Whether obviousness of claims 1-3 and 71 is established within the meaning of 35 U.S.C. § 103(a) based on the combined teachings of McLeese '407 and Chin.

(B) Whether obviousness of claims 1-3, 71 and 73 is established within the meaning of 35 U.S.C. § 103(a) based on the combined teachings of McLeese '571 and Wan.

**7. Argument - 37 C.F.R. §41.37(c)(1)(vii)**

***A. Claims 1-3 and 71 are patentably distinct over the combination of McLeese '407 and Chin within the meaning of 35 U.S.C. §103(a).***

In the Final Office Action dated February 8, 2005, claims 1-3 and 71 were rejected under 35 U.S.C. 103(a) as being unpatentable over McLeese '407 in view of Chin. As shown below, this rejection is improper and should be reversed and withdrawn.

The Examiner acknowledges that McLeese '407 does not teach "the entire opposite end edges of the second upper panel (E) each being coupled to the outer periphery of the first base panel by single interconnecting piece that causes the opposite end edges of upper panel [to be] spaced apart and extending beyond the outer periphery edge of the base panel." To compensate for this deficiency in McLeese '407, the Examiner cites Chin as disclosing an upper panel 14 and lower panels 12 where the opposite edges of the upper panel 14 extend outside the edge of the lower panels 12 via interconnecting pieces (see FIG. 6 of Chin).

Applicant respectfully submits that McLeese '407 and Chin cannot be combined because their respective teachings would not lead a person skilled in the art ("the skilled person") to the structure claimed in claim 1.

First, the pieces in McLeese '407 labeled (H) by the Examiner in the Final Office Action cannot correspond to the claimed first and second interconnecting pieces

because the pieces (H) do not couple the end edges of the upper panel to the outer periphery of the base panel. As best shown in FIGS. 1 and 2 of McLeese '407, the pieces (H) couple the side edges of the upper panel to the outer periphery of the base panel. In addition, the end edges of the upper panel in McLeese '407 are rounded at a curved point (see FIG. 2 of McLeese '407), so it would not be practical or feasible to couple an interconnecting piece to the end edge of the upper panel since one would then have a very thin piece of material that connects the rounded end edge of the upper panel to the outer periphery of the base panel. The very thin piece of material would break because it could not support the forces between the upper panel and the base panel. Thus, this configuration (i.e., the location of the pieces H and the shape of the end edges of the upper panel) ensures that the end edges of the upper panel cannot extend beyond the outer periphery of the base panel. **Most importantly, the curved nature of the end edges in McLeese '407 makes it virtually impossible to attach interconnecting fabric pieces between the end edges of the sleeve of the upper panel to the sleeve of the lower panel.**

This distinction is very important because it will have a significant impact on what the skilled person can do when attempting to combine the teachings of McLeese '407 and Chin. Specifically, even when the skilled person starts with McLeese '407 and then encounters Chin, this person would not know how to modify McLeese '407 to obtain the claimed structure. The prior art provides no motivation and there would be no logical purpose to make the combination suggested by the Examiner.

For example, in order to modify the structure in McLeese '407 to provide the end edges of the upper panel extending beyond the outer periphery of the base panel (as allegedly taught by Chin), the skilled person would need to (i) change the locations of the pieces (H), and (ii) change the rounded shape of the end edges of the upper panel. However, there is no teaching, suggestion or incentive in either McLeese '407 or Chin to make these modifications. In other words, if the skilled person were to use McLeese '407 as a starting point, why would this skilled person want to modify the structure in McLeese '407 to provide the end edges of the upper panel extending beyond the outer periphery of the base panel, and why would this skilled person want to make the changes (i) and (ii)?

In addition, the disclosure in FIG. 6 in Chin actually teaches away from the claimed invention. FIG. 6 of Chin illustrates the connection between the top panel 14 and a side panel 12. The skilled person will actually find the connection between the bottom panel 16 and a side panel 12 to be more relevant when considering a possible way for connecting the end edges of the sleeve of the upper panel in McLeese '407 to the sleeve of the lower panel. However, FIGS. 1 and 6 in Chin teach that the same connection shown in FIG. 1 is used for connecting the bottom panel 16 and a side panel 12, but this connection reveals that the edges of the side panels 12 extend inside (and not beyond) the periphery of the base or bottom panel 16. This is most clearly shown in FIGS. 1 and 2 of Chin.

Even if the Examiner insists on using the connection between the top panel 14 and a side panel 12, what is the basis or suggestion in the prior art that supports such an interpretation?

It appears that the Examiner is selecting the various limitations of claim 1 in piecemeal fashion from different prior art references in order to sustain the rejections. However, Applicant respectfully submits that this constitutes impermissible hindsight reconstruction, and fails to consider exactly what the skilled person would be thinking when this person considers the cited references side-by-side. "It is error to reconstruct the patentee's claimed invention from the prior art by using the patentee's claim as a 'blueprint.' When prior art references require selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight obtained from the invention itself." Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 227 USPQ 543 (Fed. Cir. 1985) Furthermore, "a rejection cannot be predicated on the mere identification [in a prior art reference] of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." In re Kotzab, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000).

As discussed above, at least due to the lack of motivation and suggestion to combine, the Examiner has failed to make a *prima facie* case of obviousness. "To establish a *prima facie* case of obviousness, [the accused infringer] must show 'some objective teaching in the prior art or that knowledge generally available to one

of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. Tec Air, Inc. v. Denso Manufacturing Michigan Inc., 192 F.3d 1353, 52 USPQ2d 1294 (Fed. Cir. 1999).

It is well settled patent law that "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." Carella v. Starlight Archery, 804 F.2d 1091, 231 USPQ 644 (Fed. Cir. 1986). "To prevent the use of hindsight based on the invention to defeat patentability of the invention, [the Federal Circuit] requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998).

In light of the above, claim 1, and claims 2-3 and 71, are submitted to be allowable over the combination of McLeese '407 and Chin, and the rejection of these claims should be reversed and withdrawn.

***B. Claims 1-3, 71 and 73 are patentably distinct over the combination of McLeese '571 and Wan within the meaning of 35 U.S.C. §103(a).***

In the Final Office Action dated February 8, 2005, claims 1-3, 71 and 73 were rejected under 35 U.S.C. 103(a) as being unpatentable over McLeese '571 in view of Wan. As shown below, this rejection is improper and should be reversed and withdrawn.

The Examiner acknowledges that McLeese '571 does not teach "the opposite end edges of the second upper panel (16) each being coupled to the outer periphery of the first base panel by single interconnecting piece (50) that causes the opposite end edges of upper panel [to be] spaced [sic] extending outside the outer periphery edge of the base panel (14) ...". To compensate for this deficiency in McLeese '571, the Examiner cites Wan as disclosing a plurality of panels each having "a sleeve (41) extending along an outer periphery, the sleeve of the outer periphery having straight edge portion of adjacent panels being coupled together by an interconnecting piece (32)." According to the Examiner:

"It would have been obvious to ... modify the collapsible structure of McLeese '571 having the straight portions of the opposite end edges of the upper panel being coupled to the straight portions of opposite side edges of the lower panel each by a larger interconnecting fabric piece instead of a loop for coupling the edges of two panels together as taught by Wan, as a selected desire connecting concept, as disclosed by the applicant by alternative embodiment show in Figs. 1A and 16 ..."

Applicant respectfully submits that the combination of McLeese '571 and Wan, even if proper, do not yield the structures recited in claims 1 and 73. In addition, Applicant respectfully submits that McLeese '571 and Wan cannot be combined because their respective teachings would not lead a person skilled in the art ("the skilled person") to the structures in claims 1 and 73.

Combination Will Not Yield Claimed Structures

Wan does not disclose the provision of an interconnecting piece that would cause the opposite end edges of upper panel to extend outside the outer periphery edge of the base panel. As best shown in FIG. 4 of Wan, the elongate strip of materials 32 does not cause the edge of any panel to extend outside the outer periphery of an adjacent panel. In addition, column 2, lines 64-67 of Wan only state that the materials 32 provide a "loose hinged connection between respective adjacent sides of the panels." However, neither this language nor FIG. 4 expressly disclose that the material 32 would cause the edge of any panel to extend outside the outer periphery of an adjacent panel. If anything, it would appear that the edges of the panels in Wan cannot extend outside the outer periphery of an adjacent panel. Thus, even if the combination of McLeese '571 and Wan were proper, it would not yield the structures in claim 1 and 73.



*The Combination of McLeese '571 and Wan is Improper*

First, the construction of the framework 12 in McLeese '571 makes it impractical to extend the end edges of the frame member 16 outside the periphery of the base frame 14, as suggested by the Examiner because of the existence of a third frame member 18 in the framework 12. For example, would the skilled person also extend the side edges of the third frame member 18 outside the periphery of the base panel 14, or continue to use attachment points 20 to attach the side edges of the third frame member 18 to the side edges of the base frame 14? Regardless of the option selected by the skilled person for the third frame member 18, extending the end edges of the frame member 16 outside the periphery of the base frame 14 would weaken the structural integrity of the modified framework 12. In other words, the skilled person would not have had any incentive to modify the connection between the frame members 14 and 16 because the skilled person would not know what to do with the third frame member 18.

Second, McLeese '571 discloses that the fabric 40 is applied over the frame members 14, 16, 18 and attached thereto by loops 50 in a taut fit. If the end edges of the frame member 16 are made to extend outside the periphery of the base frame 14, how is the fabric 40 to be attached to the frame members 14, 16, 18?

Thus, even if the skilled person started with McLeese '571 and desired to expand the internal space in the McLeese '571 structure (the objective suggested by the Examiner), this skilled person would have great difficulty trying to accomplish this objective by using the teachings of Wan. Detaching the three frame members 14, 16, 18 would be very complicated, and would likely jeopardize the structural integrity of the framework 12. In addition, Wan itself would not provide much assistance, because the structure in Wan is a four-sided structure where the frame members are not directly attached to each other (as in McLeese '571). In other words, this skilled person would have great difficulty trying to reconcile the teachings in both McLeese '571 and Wan, and would have absolutely no incentive to modify the framework 12 in McLeese '571 to extend the end edges of the frame member 16 outside the periphery of the base frame 14. The only incentive for doing so would be based on impermissible hindsight reconstruction. See the Federal Circuit cases cited above.

Thus, at least due to the lack of motivation and suggestion to combine, the Examiner has again failed to make a *prima facie* case of obviousness. See the Federal Circuit cases cited above.

In light of the above, claims 1 and 73, and claims 2-3 and 71, are submitted to be allowable over the combination of McLeese '571 and Wan, and the rejection of these claims should be reversed and withdrawn.

**8. CONCLUSION**

In view of the foregoing, Appellant respectfully submits that claims 1-3, 71 and 73 are patentable over the prior art and that the rejections as stated in the final Office Action of February 8, 2005, should be reversed and withdrawn.

Respectfully submitted,

Date: July 15, 2005

  
Raymond Sun, 35,699  
Attorney for Applicant

**CERTIFICATE OF MAILING**

I hereby certify that this paper and its enclosures are being deposited with the United States Postal service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Date: July 15, 2005

By:   
Raymond Sun

**CLAIMS APPENDIX - 37 C.F.R. §41.37(c)(1)(viii)**

1. A collapsible structure, comprising:

a single first base panel having a foldable frame member that has a folded and an unfolded orientation, and a material covering the frame member when the frame member is in the unfolded orientation, with the material assuming the unfolded orientation of its associated frame member, the first panel having an outer periphery and a sleeve extending along the outer periphery thereof;

a single second upper panel defined by a single foldable frame member that has a folded and an unfolded orientation, and a material covering the frame member of the upper panel when the frame member of the upper panel is in the unfolded orientation, with the material of the upper panel assuming the unfolded orientation of its associated frame member, the second panel having an outer periphery, opposing first and second end edges and a sleeve extending along the outer periphery thereof;

a first interconnecting fabric piece that couples the sleeve at the first end edge of the second panel to the sleeve of the first panel; and

a second interconnecting fabric piece that couples the sleeve at the second end edge of the second panel to the sleeve of the first panel;

wherein the first and second end edges extend outside the outer periphery of the first panel.

2. The structure of claim 1, wherein the second panel is flexed so that the first and second panels define an interior space, and with the opposing first and second end edges of the second panel coupled via the first and second interconnecting pieces to opposing locations of the first panel.

3. The structure of claim 2, wherein the second panel has a front edge that defines an opening for ingress and egress to the interior space.

71. The structure of claim 1, wherein the connections of the first and second interconnecting pieces to the end edges of the second panel and the outer periphery of the first panel are not detachable.

73. A collapsible structure, comprising:

a single first base panel having a foldable frame member that has a folded and an unfolded orientation, and a material covering the frame member when the frame member is in the unfolded orientation, with the material assuming the unfolded orientation of its associated frame member, the first panel having an outer periphery and a sleeve extending along the outer periphery thereof;

a single second upper panel defined by a single foldable frame member that has a folded and an unfolded orientation, and a material covering the frame member of the upper panel when the frame member of the upper panel is in the unfolded orientation, with the material of the upper panel assuming the unfolded orientation of its associated frame member, the second panel having an outer periphery, opposing first and second end edges and a sleeve extending along the outer periphery thereof, with each of the first and second end edges having a straight portion;

a first interconnecting fabric piece that couples the sleeve at the straight portion of the first end edge of the second panel to the sleeve of the first panel;

a second interconnecting fabric piece that couples the sleeve at the straight portion of the second end edge of the second panel to the sleeve of the first panel; and

wherein the first and second end edges extend outside the outer periphery of the first panel.

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**EVIDENCE APPENDIX - 37 C.F.R. §41.37(c)(1)(ix)**

None

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**RELATED PROCEEDINGS APPENDIX - 37 C.F.R. §41.37(c)(1)(x)**

None